

AMENDMENTS

In the Claims:

Please amend the claims as follows:

1. (Currently Amended) A data transmission system for machine tools, production machines, and robots comprising:

- a central data line comprising a plurality of distributor nodes, having
- a plurality of branch off stub-like data lines in which each comprising a plurality of signal processing units are arranged serially along the branch off stub-like data line wherein data is passed from a first signal processing unit coupled with a respective distributor node to a last signal processing unit of the plurality of signal processing units, further comprising and
- transmitting and receiving elements which respectively pass on data in a serial form, wherein a return data line from coupling the last to the first signal processing unit of the branch off stub-like data line is provided with the respective distributor node.

2. (Currently Amended) ~~A The data transmission system for machine tools, production machines, and robots, comprising~~ according to claim 1, wherein the distributor nodes of the central data line are arranged serially along the central data line wherein data is passed from a first distributor node to a last distributor node of the plurality of distributor nodes, having branch off stub-like data lines in which signal processing units are arranged, the system further comprising comprises transmitting and receiving elements which respectively pass on data in a serial form, a central return data line from coupling the last to with the first signal processing distributor unit node of the central data line is provided.

3. (Currently Amended) The data transmission system according to Claims 1 and or 2, wherein a ~~first signal processing unit is designed as a distributor node having~~ has a group control function for a respectively coupled branch off stub-like data line .

4. (Currently Amended) The data transmission system according to Claim 23, wherein a substitute distributor node is ~~incorporated in an annular communication structure~~ arranged

between a distributor node and the first signal processing unit of the respective branch off stub-like data line coupled with said distributor node.

5. (Currently Amended) The data transmission system according to Claims 1 ~~and~~ or 2, wherein a field bus system is provided as the data transmission system.

6. (Currently Amended) The data transmission system according to Claims 1 ~~and~~ or 2, wherein an Ethernet is provided as the data transmission system.

7. (NEW) The data transmission system according to Claim 4, wherein the substitute distributor node is coupled with distributor nodes adjacent to the distributor node coupled with the branch off stub-like data line.

8. (NEW) A data transmission system for machine tools, production machines, and robots comprising:

- plurality of distributor nodes serially coupled through a central data line,
- a plurality of signal processing units serially coupled through a branch off data line from a first signal processing unit to a last signal processing unit of the plurality of signal processing units, wherein the first signal processing unit is coupled with a distributor node of said plurality of distributor nodes, and
- a return data line coupling the last signal processing unit of the branch off data line with said distributor node.

9. (NEW) The data transmission system according to claim 8, further comprising a central return data line coupling a first distributor node with a last distributor node of the central data line.

10. (NEW) The data transmission system according to Claims 8 or 9, wherein a distributor node has a group control function for a respectively coupled branch off stub-like data line .

11. (NEW) The data transmission system according to Claim 8 or 9, further comprising a substitute distributor node arranged between said distributor node and the first signal processing unit of the branch off data line.

12. (NEW) The data transmission system according to Claims 8 or 9, wherein a field bus system is provided as the data transmission system.

13. (NEW) The data transmission system according to Claims 8 or 9, wherein an Ethernet is provided as the data transmission system.

14. (NEW) The data transmission system according to Claim 11, wherein the substitute distributor node is coupled with distributor nodes adjacent to the distributor node coupled with the branch off s data line.
